

## MEDICAL AIR PLANT - BRITISH STANDARD

### DESCRIPTION

Precision UK's CPX Medical Air Plant is manufactured under BS EN 13485 Medical Devices: Quality Management Systems. It provides a centralised source of medical air, available in simplex to multi-pump configurations dependant on individual requirement.

### SPECIFIC BENEFITS INCLUDE

- Fully complies to HTM 02-01, C11, BS EN 7396
- CPX® branded solid British design
- Control and highly visible indication panel
- All interconnecting pipework is included
- Outlet pipework for connecting to the pipeline
- Anti-vibration mounts on all pumps
- Isolator to each pump unit as standard
- Alarm and BMS outputs for remote status indication
- Digital display available on request
- 400Kpa, 700Kpa and 1000Kpa output versions available
- All settings are factory set and verified with certificates of inspection
- Each plant has a full warranty of 12 months from its commission date



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## AIR COMPRESSOR MODULE

The compressor module comprises of the specified number of compressors and relevant control panels. Each compressor unit is chosen for its reliability and economical operation.

The compressor units are oil lubricated, screw type, air cooled, air end directly driven by a 400v, 3ph, 50Hz TEFC electric motor coupled to an air blast after-cooler with auto drain.

Options include alternative compressor formats designed to suit customer requirements. Acoustic canopies are available to reduce noise emissions and rotary screw compressor modules.

### Compressor Starter Panels

Each compressor requires its own starter panel which incorporates contactors, overloads, ammeter and a digital hour run meter.

**The unit indicates:-** Mains Power On, Control Circuit Failed (Plant Fault), Overload Tripped (Plant Fault), Failure to Respond (Plant Fault), High Temperature (Plant Fault).

The panel also provides BMS contacts for a compressor running signal.

### Pressure Vessel

All vessels are vertical mounted and constructed to BS5169 or EN286. The vessel comprises of a pressure relief valve fusible plug, pressure gauge, and auto drain with manual bypass and inspection holes to provide full internal inspection.

One coat of self-etching primer and two coats of blue non-cell gloss finish protect the vessel.

### Duplex Filter Dryer Module

Two individual sub-assemblies are formed to make the module, each assembly comprises of :-

Pre-filter - particle removal down to 1 micron.

Coalescing filter - particle removal down to 0.01 micron.

Dryer – twin column heatless air regenerated desiccant dryer.

Dust filter – particle removal down to 1 micron, with active carbon element to remove vapours hydrocarbon odours.

Dryer control panel consisting timing mechanism, economy circuit for regeneration, dew point sensor, dryer selector switch and auto changeover circuit for each dryer. The panel also displays which dryer is selected normal and failed indications.

A duplex filter/pressure regulating unit is fitted to the assembly. It comprises of sterile filters and non-relieving pressure regulators, which regulate the output pressure of the plant to 4 Bar (7 Bar optional). The whole assembly requires a separate 230v, 1ph, 50Hz power supply).

### Compressor Starter Units

Operate their respective compressor only and are designed such that all safety interlocks inhibit plant operation until manually reset by means of a reset button. Isolators are interlocked with covers and circuits protected by circuit breakers.

**Each panel includes:** - Industrial Grade Ammeter to BS89, Digital Total Hours Run Counter, Mains Supply On Indicator.

**Indicators display:** - Control Circuit Failed (Plant Fault), Overload Tripped (Plant Fault), Failure of Compressor to Respond (Plant Fault), After Cooler Outlet Air Temperature High (Plant Fault).

### Plant Control Panel

The plant control panel controls the operation of the whole system and ensures that it matches demand with compressor selection. It ensures that each compressor is run equal to maximise compressor life. The panel incorporates a central control which can operate up to four compressors. A pressure transducer controls the cut in and cut out settings of the compressors.

**The unit displays:** - Mains Supply On, Pump Called For, Pump Operating, Pressure (digital display), Plant Service.

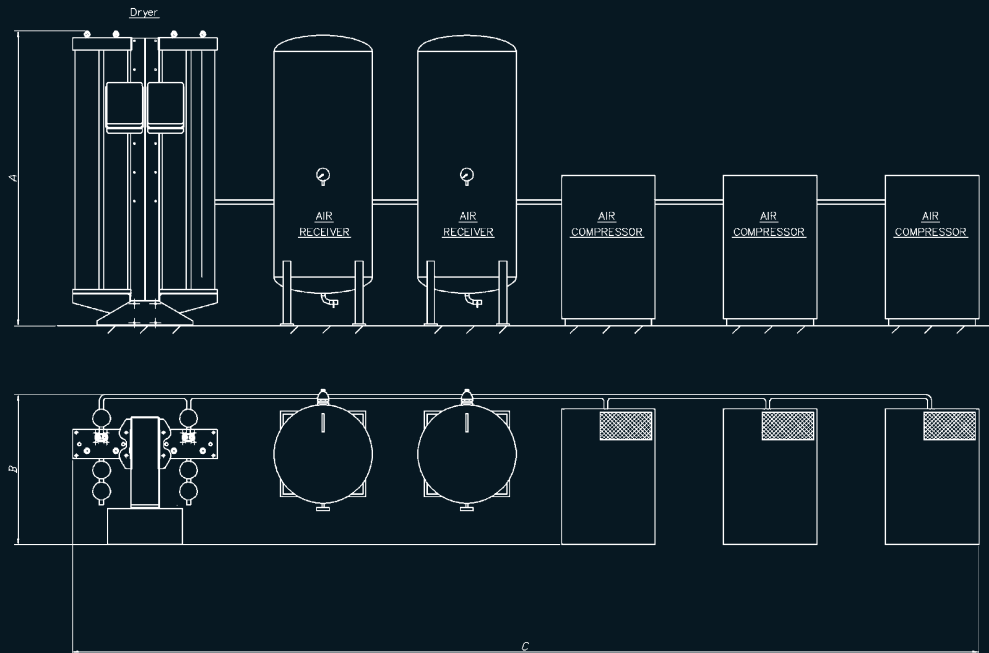
The panel incorporates the plant to alarm interface which displays and provides volt free contacts to a centralised alarm system as well as BMS contacts the following: - Plant Fault, Plant Emergency, Reserve Cylinder Low, Pressure Fault.

### Service and Maintenance

Throughout the UK and worldwide our approved team of service and maintenance engineers provide immediate technical support.

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## STANDARD AIR PLANT CONFIGURATIONS



Product Code	Plant size	Dim A	Dim B	Dim C	Vessels	kW	Start type	Start (A)	Run (A)	Fuse (A)	Noise	Weight
<b>Duplex Air Plant</b>												
MA-420-D	420 l/min	1850 mm	800 mm	3250 mm	1 x 210 l	2 x 4.0	S.D.	21.25	8.5	10	62 dB(A)	515 kg
MA-580-D	580 l/min	2000 mm	900 mm	3400 mm	1 x 300 l	2 x 5.5	S.D.	28.25	11.3	16	66 dB(A)	640 kg
MA-800-D	800 l/min	2000 mm	1100 mm	3500 mm	1 x 400 l	2 x 7.5	S.D.	38	15.2	16	70 dB(A)	750 kg
MA-1100-D	1100 l/min	2300 mm	1100 mm	3500 mm	1 x 580 l	2 x 11.0	S.D.	48.75	19.5	20	70 dB(A)	830 kg
MA-1800-D	1800 l/min	2200 mm	1300 mm	3800 mm	1 x 900 l	2 x 15.0	S.D.	73.25	29.3	32	70 dB(A)	1160 kg
MA-2250-D	2250 l/min	2250 mm	1300 mm	4150 mm	1 x 1200 l	2 x 18.5	S.D.	90	36	40	71 dB(A)	1450 kg
MA-2650-D	2650 l/min	2450mm	1300 mm	4150mm	1 x 1400 l	2 x 22.0	S.D.	102.5	41	50	71 dB(A)	1520 kg
<b>Triplex Air Plant</b>												
MA-840-T	840 l/min	2000 mm	800 mm	4400 mm	1 x 420 l	3 x 4.0	S.D.	29.75	8.5	10	62 dB(A)	950 kg
MA-1160-T	1160 l/min	2200 mm	900 mm	4500 mm	1 x 580 l	3 x 5.5	S.D.	39.55	11.3	16	66 dB(A)	1050 kg
MA-1600-T	1600 l/min	2200 mm	1100 mm	4700 mm	1 x 800 l	3 x 7.5	S.D.	53.2	15.2	16	70 dB(A)	1450 kg
MA-2200-T	2200 l/min	2300 mm	1100 mm	4700 mm	1 x 1100 l	3 x 11.0	S.D.	68.25	19.5	20	70 dB(A)	1550 kg
MA-3600-T	3600 l/min	2650 mm	1300 mm	5900 mm	2 x 900 l	3 x 15.0	S.D.	102.55	29.3	32	70 dB(A)	2130 kg
MA-4500-T	4500 l/min	2650 mm	1300 mm	6200 mm	2 x 1150 l	3 x 18.5	S.D.	126	36	40	71 dB(A)	2370 kg
MA-5300-T	5300 l/min	2650mm	1300 mm	6200 mm	2 x 1350 l	3 x 22.0	S.D.	143.5	41	50	71 dB(A)	2400 kg
<b>Quadplex Air Plant</b>												
MA-1250-Q	1250 l/min	2200 mm	800 mm	5500 mm	1 x 625 l	3 x 4.0	S.D.	38.25	8.5	10	62 dB(A)	1100 kg
MA-1700-Q	1700 l/min	2200 mm	900 mm	5600 mm	1 x 850 l	3 x 5.5	S.D.	50.85	11.3	16	66 dB(A)	1250 kg
MA-2400-Q	2400 l/min	2400 mm	1100 mm	5800 mm	1 x 1200 l	3 x 7.5	S.D.	68.4	15.2	16	70 dB(A)	1700 kg
MA-3300-Q	3300 l/min	2650 mm	1100 mm	6800 mm	2 x 825 l	3 x 11.0	S.D.	87.75	19.5	20	70 dB(A)	2000 kg
MA-5400-Q	5400 l/min	2650 mm	1300 mm	7000 mm	2 x 1350 l	3 x 15.0	S.D.	131.85	29.3	32	70 dB(A)	2550 kg
MA-6700-Q	6700 l/min	2650 mm	1300 mm	8200 mm	3 x 1150 l	3 x 18.5	S.D.	162	36	40	71 dB(A)	3000 kg
MA-8000-Q	8000 l/min	2650mm	1300 mm	8200 mm	3 x 1350 l	3 x 22.0	S.D.	184.5	41	50	71 dB(A)	3300 kg

**Distributor details:**

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